

November 30, 2015  
MSE 2101 topics

- Tidal friction: quick recap
  - tidal locking of the Moon: 4cm/year, 1s/50,000 years
- Tidal heating as the dominant source of energy
- Io
- Europa:
  - spectroscopy from Earth
  - Voyager
  - Galileo orbiter
- Water on Europa
  - lack of impact craters
  - zig-zaggy (a.k.a. chaotic) terrain
  - magnetic field
  - future prospects: altimetry and radio wave reflections
  - just how much water might there be?
- Life on Europa
  - building blocks? liquid? energy?
  - energy for the origin and energy for ongoing life support
- Ganymede, Callisto and other moons of Jupiter